STWE REVIEW

JULY, 1958

Volume 5 Number 3

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JULY 1958
VOL. 5 NO. 3 JOURNAL OF THE SOCIETY OF TECHNICAL WRITERS AND EDITORS

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Electronics Park
Syracuse, New York

PRODUCED BY:
Ewing Technical Design, Inc.
1913 Arch Street
Philadelphia 3, Penna.

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STWE REVIEW is published quarterly (January, April, July, and October) by the Society of Technical Writers and Editors, Inc., PO Box 3706, Beechwold Station, Columbus 14, Ohio. Second-class mail privileges authorized at Columbus, Ohio. Printed in the U.S.A. *Copyright 1958 by the Society of Technical Writers and Editors, Inc.* *Subscriptions are $4.00 per year; single copies $1.00. Subscription Manager—Thomas R. O'Neill, 216 President Street, Passaic, New Jersey.*

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ETHALINE CORTELYOU

Teacher, chemist, writer, editor, and mother of a 22-year-old medical student are the many facets of Mrs. Ethaline Cortelyou, a very active member of STWE. "Corte", Armour Research Foundation's literary analyst, has achieved national fame in her technical writing and editing career.

Since college days Corte has kept continuously active on a great variety of jobs. Among her most interesting former positions were: first woman instructor in the University of Tennessee's chemistry department, trouble shooter in a steel mill, ghost writer in an ammunition-loading plant, and editor on the famed Manhattan Project.

Corte's editing career began while she was an assistant to the chief analytical chemist at the Kingsbury Ordnance Plant. She offered some sympathic assistance to a scientist who was having difficulty getting a report accepted as readable.

After this incident reports started to find their way to Corte and management noticed a remarkable improvement in the work submitted by the staff. That was how Corte was assigned a new job—"ghost writing" and editing technical research papers. At Kingsbury Corte also brought out her knowledge of statistics and tabulation of data, which is her specialty in the technical editing field. She became known as the girl who could "reduce 24 pages of confusing text into a lucid two-page table".

As ARF's literary analyst she serves as advisor to eight editors and also to the three ARF libraries (document, report and reference). She reads all reports that go out of the Foundation, and teaches four report writing classes a year.

Besides editing, Corte enjoys going to meetings, playing bridge, giving advice, getting involved in a good argument, report, and reference). She reads all reports that 40 papers which were published in technical journals.

Corte is also active in several professional organizations outside of STWE; they include: the American Chemical Society, the American Association for the Advancement of Science, the American Documentation Institute, and Sigma Delta Epsilon, a woman's scientific honorary.

A desire for large, bright colored hats, and a collection of some 274 pairs of earrings mark Corte as a typical as well as a remarkably unusual woman.

ANNE GREGORY

Anne Lane Gregory, a member of the Editorial Board, *STWE Review,* and also the Secretary for the STWE Central New York Chapter, was born in Utica, New York. Her girlhood years were spent in Remsen, Prospect, and Poland, small towns located in the foothills of the Adirondacks. She received her elementary and high school education in local schools. Under a partial English scholarship, she attended Syracuse University. At the end of her sophomore year, Anne became the wife of John Gregory. They now have three children: Linda Anne, 10 years; Johnny, 5 years; and Kathy, 3 years.

Anne's energy and drive are prodigious. She has worked for General Electric for nine years; the past three as Technical Editor for HMEE Technical Publications. An ardent worker in STWE's Central New York Chapter since it began, she is now serving her second term as Secretary, and is also serving on the Publicity Committee. Last fall this busy young woman returned to Syracuse University nights to get her bachelor's degree in journalism.

Her other affiliations are the Zeta Tau Sorority, Royal Order of Ancient Hibernians, and Confraternity of Christian Mothers.

Anne's favorite recreation is fishing in Canada with her husband, a G.E. Traffic Specialist, and her children. Other hobbies are teaching her ten year old daughter to dance, doing creative writing, reading, and cooking.

REMOVE THE DOUBT

What is the definition of professionalism? Must each group find its own? Who should decide what professionalism is, the group itself or society?

Let's first look at professionalism as it applies to groups and see if we can arrive at a satisfactory conclusion.

In my office recently, I tried an experiment with five men: two engineers, an educator, an art director, and an audio-visual communications specialist. To trigger some ideas, I asked them to name some professions at random—not in any particular order but just as they came to mind. If we thought a profession could not be clearly limited, we put a question mark after it.

When we had finished, the list—written on a large wall pad—looked like this:

Medicine	Architecture
Law	Entertainment
Theology	Advertising and
Education	Public Relations
Politics (?)	Finance
Engineering, Science (?)	Sports
Editing, Writing (?)	Military
Art	

Of course, these don't exhaust all the possibilities, but it's a fairly representative listing for our purpose. You might carry this experiment further by discussing it in your car pool or at an informal gathering of friends.

The next logical step was to find the criteria—a common denominator—for judging universal professionalism.

This time the wall pad read:

Legal Status
Service to Mankind (Dedication)
Preparation and Continuing Search
Education (Formal and nonformal)
Creative Approach to Problem Solving
Acceptance by Society, Associates

Thoroughly analyzing each of these attempts, the men arrived at the following conclusions. They immediately agreed that *Legal Status* is applicable to only a few groups and that *Education,* with its broad connotation, is not definitive enough.

Nor did *Preparation and Continuing Search* and *Creative Approach to Problem Solving* receive unqualified approval. For a nebulous state exists in some trades and skills—those not usually classified by society as professions. *Degree* of creative approach might be a factor, they decided, but where do you draw the line?

Even *Service to Mankind* was questionable. "A professional night-club entertainer, a professional baseball player, and some writers may be dedicated, but their services to mankind are a tenuous thing," commented the communications specialist.

Acceptance by Society and Associates — a sound basis for judgment, the panel decided—formed the enveloping factor for evaluating a group's professional status. However, society's hazy and sometimes untutored concept of a professional group is not a product of the same set of values as the criteria established by professional groups themselves. This, then, leads to a different image in each collective mind, that of the layman and that of the professional.

Wouldn't it be useless then to attempt to implant the professional's image in the layman's mind? Is it necessary that they agree? Probably the layman is not the least bit interested. Nor will the criteria evolved by a professional group prevent other vocations from assuming professional status in the eyes of society.

Considering all these points, it would appear that the arguments and noise found in some circles today about professionalism are as pointless as they are endless. Simply and directly, the answer is action. Action: channeling your efforts in a direction that will gain recognition and respect for—and by—a specific profession and the individuals in that profession.

By setting a high standard of professional behavior, and maintaining it, and by becoming a better technical writer, or editor, the individual can benefit mankind and gain stature for himself and his profession.

PAUL R. HEINMILLER
Editor
General Electric Review

AN EDITORIAL POLICY

The editorial policy of the *STWE Review* is quite simple. It is your voice and your forum. It is your profession in print.

The *Review* seeks articles covering the broad spectrum of the practice and training for writing, editing, illustrating, production, and management. Many articles are received both from STWE members and others. Each is reviewed by the editors with the able assistance of the editorial board. This selective process results in many more fine articles than there is room for in this

(Continued on Page 27)

TRAINING THE TECHNICAL WRITER

Susan Shaffer Dibelka

. . . those demanding better science training for more and better scientists are posing a corollary requirement for more and better training for more and better technical writers.

Technical writers, as I see it, are the people who write and edit materials basically scientific or technical in content. The form these materials take is governed by their purpose. Technical writings may include reports, manuals, instruction materials, sales and promotional literature, advertisements, office memoranda, articles for scientific journals and business papers, as well as motion picture, radio, and television scripts.

Technical writing utilizes all the communication arts —researching, writing, reporting, editing, illustration, layout, and reproduction. The practitioner may be a specialist in one phase of communication skills; but to be 100 per cent efficient he should have at least a speaking acquaintance with all of the techniques involved in getting a manuscript into production.

The technical writer has the same dual approach to his job as any other person in a specialized field of communication, as for example agricultural journalism, home economics journalism or, economics writing. He has to know his subject and have enough journalistic skill to make his presentation accurate, interesting and understandable. Training for a job requiring a background in more than one discipline always poses the question of which discipline is more important. Communication media being what they are, and scientific discoveries and development being what *they* are, has a tendency to compound the issue as to which discipline, science or journalism, offers the best background for technical writing.

Technical writers themselves cannot agree on which is best. In fact, training for technical writing is good for a lively discussion whenever two or more tech writers get together. Those who have journalism or liberal arts background favor their type of training. Those with engineering or science background are just as certain that theirs is best.

To say, dogmatically, that one kind of training, as engineering, or journalism, or liberal arts plus science is best or most desirable, seems to me impossible, unless one specifies also the particular area in which the writer is to work. And even then one may fail in his diagnosis of the best training, for other significant factors must be considered.

Among these are the qualities that make up the personality of the writer—the gregarious, impertinent, intrepid, nosy, brazen, curious, everlastingly skeptical mental attitude of the writer.

Perhaps no other professional worker has the temerity of the writer. Temerity to take a subject about which he knows practically nothing, and by sheer force of will, and his skill with the tools of communication, bridge the gap between the reader's lack of knowledge and what he has to know.

This is not to imply that writers with no engineering background can immediately handle engineering reports. Many writers would not wish to engage in such activity, as they could not find it to be sufficiently "creative." The point I want to make is that trained and skilled writers can and do assimilate material foreign to anything previously known to them, and through hard work and prodigious feats of relation and correlation, produce a book or a treatise, a report or a script, even a novel or a detective story, which represents an achievement in documentation and communication.

The techniques involved in collecting, sifting, and writing technical and scientific materials are no different from those required in writing a biography such as *Bernard Baruch,* or *The Lion and the Crown.* To be sure the content and subject matter of a progress report on some phase of missile development, for example, differs greatly from that of the life story of an English jurist of the 18th century, or any similar piece of creative, factual writing. But the muscle stretching, especially of the think muscles, and the handling of the tools of communication necessary to both enterprises, bears close relationship.

The competent writer can overcome the difficulty of unfamiliar subject matter. It neither frightens him or

throws him. To many writers tough material is a challenge. But he does need incentive to fire his enthusiasm and stir his emotion. For it is these that carry him over the rough spots when the meaning of facts elude him and the words to convey their meaning seem nowhere to be found. Without incentive his task may be unbearable. With it, he is on top of the world, no matter what shape his composition takes.

Whether the thing he writes goes into some file marked "classified" only to be read by a few, or whether it becomes the basis of a story which startles the world, makes little difference to the dedicated writer. Once he understands the need for someone to put new and unfamiliar data into written form, he can be sold on the need to discipline himself to handle the assignments required of him.

This brief, and admittedly hasty dissection of the mental characteristics of the writer seems to offer some clue to the riddle of training for technical writing.

Regardless of his scientific and technical background, the technical writer is not an engineer, a chemist, or a scientist; he is a writer. The arts and crafts he practices are those of communication by the written word. The whole question of his training is simplified when we recognize that training technical writers means training writers to practice in a specialized field of communication. This means that we should expect technical writers to be trained in those places which offer professional training for writers. These include all schools which emphasize the communication arts in a special sequence of courses; colleges and universities, journalism schools, adult evening schools, university extension courses, and the like; engineering schools, too, if they offer advanced courses in writing.

That a great many employers of technical writers do recognize the value of professional writing training is indicated in the replies to a questionnaire I sent to a number of them, asking their requirements for their technical publication staff personnel.

The questionnaire to employers was one phase of a survey of opportunities in technical and scientific writing, financed by a research grant awarded by Theta Sigma Phi, professional fraternity for women in journalism. I mailed my query to about 600 industrial firms, research institutes, government agencies, technical publishers, general publishers, and professional societies. I asked them to give me their "ideal" educational background for a technical writer.

Of the 274 firms or organizations replying, 119 list a journalism degree or training in journalism as a basic requirement; 97 consider journalism helpful; 14 consider journalism not helpful.

In terms of background,

114 firms consider engineering training helpful; 30 require an engineering degree; and

51 employers declared for other science background, with or without journalism or English composition.

Their preferences in fields of training are: agriculture and home economics, 17; medicine, 9; physical sciences, 9; chemistry, 8; electronics, 5; pharmacy, 4; math, 3; astronomy, biology, geology and petroleum science, one each.

Other basic requirements included: aviation experience, 3; technical training, 3; economics, 2.

Percentage-wise, approximately 79 per cent of the 274 firms replying stated that they would prefer their technical writers to have journalism training.

Next step in the survey was to consult the Journalism schools, to see how many offer courses that might prepare writers for the special field of technical publishing. Letters were sent to the heads of the 45 leading journalism schools. Of the 34 responding,

20 offer one or more courses designated as technical journalism;

17 offer training in the preparation of technical articles in their curricula in magazine writing and editing;

16 offer courses designated as trade and industrial publications;

11 each offer courses in home economics and in agricultural journalism;

8 schools offer a journalism program designated as "tailored to the specialized interests of the student" which may include a science option if the student so desires;

8 schools offer a definite science option or sequence in science writing in connection with journalism courses;

3 schools offer a full curriculum in medical writing;

1 school had considered inaugurating a course in technical writing slanted toward engineering and science, but had to abandon the program for lack of funds:

In most instances, the courses in technical journalism offered by the 20 schools refer to preparation for work on industrial papers and business magazines, and deal with the mechanics of writing and editing rather than with review of subject matter covered in the field of technical writing. Exceptions are the curricula in technical journalism offered at Iowa State College, Oklahoma State University, and Kansas State College of Agriculture and Applied Science, which are slanted toward specialization in science and engineering. Also excepted are the courses in medical journalism offered at University of Illinois, University of Oklahoma and University of Missouri. A five year program at Northwestern University offers opportunity to train for science writing.

Columbia University Graduate School of Journalism, in New York city, expects to inaugurate an advanced science writing program next year. Columbia University and Michigan State University offer graduate scholarships in science writing slanted particularly to persons already engaged in journalistic work.

To those who wonder how a journalism school can train students specifically for technical writing, we refer to Clement E. Trout, head of the Department of Technical Journalism at Oklahoma State University.

PREFERRED TRAINING FOR TECHNICAL WRITING SURVEY

Curriculum	Required	Helpful	Not Helpful
Journalism	119*	57	14
Engineering	114**	27	
Other Science With or Without Journalism and English Composition			
Agriculture and Home Ec.		17	
Medicine		9	
Physical Sciences		9	
Chemistry		8	
Electronics		5	
Pharmacy		4	
Math		3	

*10 require degrees
**30 require degrees

BREAKDOWN OF REPLIES

Industry and Business	88	Technical Publishers	7
Research Foundations	6	Publishers of Periodicals	48
Trade and Professional Organizations	20	News & Feature Syndicates	5
U.S. Government (Civilian & Military)	19	Newspaper Science Editors	8
Book Publishers	18		

"We go on the theory that specialized writing requires a combination of courses in the special fields and the full background of writing and interpretations," says Mr. Trout.

"In training for science writing we insist that students get a thorough grounding in the basic courses in both physical and biological sciences, with some junior and senior work in one or preferably both fields. Some general background work, particularly in history and English, also is required.

"Along with this students have basic work in news writing, fundamentals of editing, feature writing, and possibly some writing practice or a special course in technical writing, although we do not use that term for our course designation. We also insist on some work in typography and layout, and the basic principles of planning and producing a publication.

"In other words we want students to have the fundamentals of both the technical fields in which they are interested, and the principles and practice in writing, interpretations, communication, and production.

"For the specialized engineering fields we recommend a selected series of engineering courses pretty much as though they were preparing for a degree in Engineering."

This ncessarily brief summary of the kind of training employers of technical writers prefer, and that available in a few universities, indicates that a milestone has been passed in the eventual solution of the problem of training technical writers.

But there is still a phase of the whole question to be considered. This is the general lack of information regarding this specialized field of publishing. Practicing writers, young people planning careers in writing, and

SCHOOL	Courses in Technical Journalism	Courses in Preparation of Technical Articles	Courses in Trade & Industrial Publications	Agri-cultural Journalism Courses	Home Economics Journalism Courses	"Tailored to Student Interests" Journalism Curricula	Science Option in Journalism Curricula	Full Curricula in Medical Writing
U. of Southern Calif.			X					
Stanford Univ.		X						
Univ. of California						X		
Univ. of Georgia			X		X		X	
Univ. of Florida				X				
Univ. of Illinois		X	X	X	X			X
Northwestern Univ.		X	X		X			
Indiana Univ.						X		
Univ. of Iowa			X					
Iowa State Univ.	X	X	X	X	X			
Univ. of Kansas			X				X	
Kansas State College	X	X	X	X	X			
Michigan State Univ.		X	X				X	
Univ. of Missouri		X	X	X	X			X
Univ. of Minnesota	X	X	X	X	X	X		
Montana State Univ.		X	X	X				
Rutgers Univ.	X	X	X		X			
Columbia Univ. Grad. Sch. of Jour.		X	X				X	
Syracuse Univ.		X	X			X		
Univ. of Oregon						X		
Ohio Univ.			X				X	
Ohio State Univ.		X						
Univ. of Oklahoma		X	X					X
Oklahoma State Univ.	X	X	X	X	X			
Pennsylvania State Univ.		X	X	X	X		X	
South Dakota State Coll.				X	X			
Univ. of Texas	X	X	X					
Univ. of Wisconsin		X	X					
Univ. of Washington		X	X					
Marquette Univ.			X				X	

many schools engaged in training writers, know little or nothing about the field, or the need, as one expert puts it, for a ratio of one writer to every six engineers, if we are to solve the technological problems that confront us in the Age of Space.

To publicize the job of the technical writer and his contribution to our country's scientific achievement should be an important objective of the technical publishing societies. We should let the world, and especially the youngsters in high schools, know that writers are just as essential to the launching of Vanguard and the Explorers as they are to the production of the New York Times or the latest television spectacular.

Writers are versatile and persistent. Once they understand the need for their services in technical publishing, they will be knocking at the college gates, seeking out the courses they need in preparation for such work. At present this important lever, the demand by students for courses of training in this field, is completely lacking. Those who are truly interested in the proper training for technical writing, should see that young people know about the career opportunities in the field.

The responsibility for collecting and dispersing this information falls upon the professional societies as they are the only group capable of doing it. Lack of information about the field of technical writing on the part of those who would be interested, is one of the greatest blocks toward the inauguration of suitable training for the work. Ω

WHAT THE TECHNICAL WRITER NEEDS

H. F. Arader, S. P. Olmstead, & E. R. Steinberg

Should the technical writer be engineering—or writing—trained? This is an often asked question, and Doctors Arader and Olmstead argue both cases.

Two talks were presented at the September 1957 meeting of the Pittsburgh Chapter of STWE on the training of technical writers. We feel these talks form an important part of our series of articles on education. With the space limitations in our journal we decided to condense their talks and Professor Steinberg's introduction rather than present the talks in two separate issues of the REVIEW. Mrs. Claire Cox of the Central New York Chapter of STWE was kind enough to do the condensing for us. Thank you Claire. ED.

PROFESSIONAL STANDARDS FOR TECHNICAL WRITERS AND EDITORS

Erwin R. Steinberg

One of the first tasks of any professional organization is to set standards for membership in that profession. These standards are useful in determining eligibility for membership in the organization; they provide yardsticks for personnel officers; and they serve as guides for colleges and universities offering training in the particular field or profession. Therefore, the Society of Technical Writers and Editors, is concerned with establishing and maintaining professional standards. The function of STWE's Education and Professional Development Committee is to formulate and promote programs for the education of technical writers and editors, and to formulate professional standards for technical writers and editors.

The task, obviously, is a formidable one.

The chaos that can result from the lack of professional standards was suggested in two consecutive issues of *Technical Publishing*.

In an attempt to consider this matter intelligently, the Pittsburgh chapter of STWE held a meeting last September on "What the Technical Writer Needs". The two main speakers were Dr. Sterling P. Olmstead, Head of the Department of Language and Literature at Rensselaer Polytechnic Institute, and Dr. Harry F. Arader, Project Director for the Development Program at the University of Pennsylvania. Both men know the field of technical writing well.

The question period which followed these papers helped to narrow the issues. There was general consensus that the ideal technical writer should be well trained in both science and engineering on the one hand and writing on the other, and that he should have a good background in the humanities and the social sciences. With such training, he could handle adequately the broad variety of projects undertaken by technical writers—from writing technical reports and papers to writing public relations material and advertising copy. He would be able to write for technical people, for semi-technical people, and for non-technical people. It was also generally agreed, however, that one seldom finds the ideally trained technical writer discussed above.

LIBERAL ARTS EDUCATION FOR THE TECHNICAL WRITER

Harry F. Arader

The problem that engages us—preparation for the profession of technical writing and editing—has been discussed *ad nauseam* at most meetings of technical writers and editors. Perhaps some good has come of these discussions, but the problem has not been solved.

I wish to dwell for a moment on a distinction that is, for me, the essence of the problem—the distinction between writing and engineering. Ignorance of the difference between these two professions is the cause of the present controversy as to how the technical writer should be trained.

Is there not a *basic* difference between the writer and the engineer? Are not persons who choose the one career essentially different from persons who choose the other?

As I see it, there is an essential difference. The writer deals with symbols, the engineer with actualities.

What are words other than the more or less arbitrarily selected symbols that man has created? The writer works in the direction of the symbolic, the abstract. I would ask you to think of the direction as an upward one.

The engineer, on the other hand, works in the opposite direction. He casts his mental images into concrete, visual molds. An engineer, after all, is a man who has to do with objects, with mechanisms. If he is to succeed in his profession, he must have a strong propensity for going from the ideal to the real, for translating a vision into the actuality of hardware, if I may use that term in this sense.

One's "direction", it seems to me, is inborn, based upon the way his brain cells happened to be put together. Or perhaps early environment determines whether one will be more at home turning things into images or images into things. In any case, I do not believe that school—certainly not college—can reverse this instinctive bent.

Consequently, I would as soon propose turning apples into oranges as I would turning persons whose instinct is for engineering into persons whose instinct is for writing. I believe that those renegade engineers who have found the good life in writing should never have tried to be engineers in the first place. Such persons strengthen my conviction that there is a fundamental difference between the temperaments required for the two activities. For me, the engineering-trained Johnny-come-latelies who now adorn the technical writing field in great numbers prove that one must eventually follow his inborn direction, even though he might, consciously or unconsciously, put off doing so for years.

Let me make it clear that I speak of the great mass in this connection. There are, of course, those rare geniuses who can operate in both directions with equal effectiveness. For these enviable hermaphrodites let the combined fields of engineering and writing cry "hats off!" in unison; the occasions for doing so will be few.

As the engineer differs from the writer, so also, obviously, do engineering tasks differ from writing tasks. As I see it, a blurring, a confusing of these different tasks is the unsound basis of the argument that the technical writer must be an engineer.

I have heard this sort of thing many times: "In my company the technical writer is often given only a few ideas to work with. A senior engineer will say, 'I have a hunch that if we do such and so we might end up with this and that. Work it out for me and write it up.' " The person who is given this sort of assignment must obviously be an engineer. If you need someone for this kind of work you must go to the appropriate engineering school and hire him. But do not confuse the issue by calling him a technical writer.

Surely, it is more logical for the technical writer to acquire whatever particular vocabulary and other special "ground rules" he will need *after* he has learned the basic principles of writing, the basic and universal principles of communicating by use of symbols. The special vocabulary, which is different for each particular industrial category or research area, can be easily picked up during his first months on the job.

We cannot ignore the simple fact that the engineering curriculum provides the best preparation for *engineering* and the liberal arts curriculum provides the best preparation for *writing*. A visitor from Mars might ask why there had ever been any question.

THE TRAINING OF TECHNICAL WRITERS

Sterling P. Olmstead

At every meeting of technical writers an argument breaks out between those who hold that a technical writer should be educated primarily as an engineer or scientist and those who believe he should be educated primarily as a journalist or even an English major.

I am in a peculiar position; I am neither a scientist nor an engineer. My graduate and undergraduate majors were all English. I *should* be arguing on the other side.

However, I have a strong feeling that there would be no argument at all if we could just agree on what we mean by a technical writer. The disagreement about training only reflects the general confusion about what technical writing is and what the technical writer does. I suggest that we begin by recognizing that in technical writing, there are at least three major and independent variables.

1. The technical level of the subject matter.
2. The technical background of the reader.
3. The precise requirements of the so-called writer's job.

I think we can probably agree that unless the subject matter is concerned with the natural sciences or their application, the writer should probably not be called a technical writer.

Applying the criterion I suggested, we would say, for example, that the writer on economic or social problems, no matter how technical these problems may be from the point of view of economics or sociology, is not a technical writer. But this is only part of the problem of defining a field and determining the training which is essential for it.

Some time ago, I visited a company in which two different departments were engaged in what they both called technical writing. In one department, I was told, "We want men who can write. We'll give them the technical subject matter." In the other department, I found that one of the technical writers had a PhD in chemistry. Both departments were right about their requirements. The technical level of the subject matter in the first department was very low. Almost any intelli-

gent person could master the subject in a short time. In the second department, graduate training in chemistry was essential. No company educational program could possibly make up for this lack.

The second variable is the technical background of the reader. To continue with the same illustration I've already used, the first department was producing attractive little manuals to be sold to customers for a small fee. The customers were amateurs, enthusiastic, but usually untrained. In the second department, the chief product was reports directed to graduate chemists.

The professional technical writer is a new breed. He exists to fill a relatively new need. Machines and systems are becoming increasingly complex and somebody has to interpret and explain. Right here is the difficulty. *The greater the difference between the technical level of the subject matter and the technical level of the audience, the greater the need for skilled interpretation.* The real problem arises when the technical difficulty of the subject matter is great, and the reader is relatively untrained. The primary function of the technical writer is to solve this problem. Less demanding jobs may be done by engineers and scientists who do some writing, or by journalists and advertising men who interpret science and technology second hand.

This brings us to the third variable, the requirements of the job. We have been talking about technical writers as if their principal job were writing. Many of them, as I am sure you know, spend comparatively little time at a typewriter. A list of the things some writers do would be formidable.

The picture is not a simple one. Actually, I'm arguing for two things: first, the recognition of a core profession, of technical writing; and second, the importance of team operations. The technical writer has come on the scene to do a relatively new and highly skilled job. There has never been anything quite like it. He is a middle man, a go-between. Accurate technical knowledge is essential, but to do the whole job, the writer needs additional kinds of training.

Technical knowledge is the first essential. The technical knowledge that the technical writer has should be as basic as possible for the kind of job I am talking about. He is not going to be in a position to develop new processes, new equipment, or new theories. That isn't his job. But he must be able to interpret concepts and systems which have not yet even been thought of.

The second requirement—training in the arts of writing and interpretation—implies something more than "wordsmithing," important as that is. The good writer must be able to analyze a communication problem and design a publication which will do the job economically for a particular audience. He must also have practical skill in the plain business of expression and communication. Knowledge of publication methods seems to me to be of less significance, because here the professional writer can count on the most competent assistance.

This brings me to the team itself. If there is a need for a skilled professional who combines knowledge of subject matter with skill in expression and understanding of methods, there is also room for other men who have one part or another of his knowledge and skill and who can be brought together into a team which will, under his direction, do a better job than he could possibly do alone or maybe even if he were assisted by a dozen others just like himself.

As educators we play a role on a team which, of necessity, includes teachers of science and engineering, just as teachers in the various branches of engineering must build on a foundation which was laid by scientists and mathematicians. I don't think there is any one system of training, but I am contending that the professional writer needs a sound education in the subject matter about which he will write, plus, if possible, intensive work in writing and other methods of presentation. Ω

A GLOSSARY FOR RESEARCH REPORTS

C. D. Graham, Jr.

Common words and phrases used in the literature of metallurgy and their real meanings.

We are grateful to METAL PROGRESS for allowing us to reprint this article from their May 1957 issue. ED.

Introduction

It has long been known that . . . I haven't bothered to look up the original reference.

. . . of great theoretical and practical importance . . . interesting to me.

While it has not been possible to provide definite answers to these questions . . . The experiments didn't work out, but I figured I could at least get a publication out of it.

Experimental Procedure

The W-Pb system was chosen as especially suitable to show the predicted behavior . . . The fellow in the next lab had some already made up.

High-purity . . . Very high purity . . . Extremely high purity . . . Super-purity . . . Spectroscopically pure . . . Composition unknown except for the exaggerated claims of the supplier.

A fiducial reference line . . . A scratch.

Three of the samples were chosen for detailed study . . . The results on the others didn't make sense and were ignored.

. . . accidentally strained during mounting . . . dropped on the floor.

. . . handled with extreme care throughout the experiments . . . not dropped on the floor.

*. . . given a homogenizing anneal . . .*oxidized.

Results

Typical results are shown . . . The best results are shown.

Although some detail has been lost in reproduction, it is clear from the original micrograph that . . . It is impossible to tell from the micrograph.

Presumably at longer times . . . I didn't take time to find out.

The agreement with the predicted curve is
excellent . . . fair.
good . . . poor.
satisfactory . . . doubtful.
fair . . . imaginary.

. . . as good as could be expected considering the approximations made in the analysis . . . non-existent.

These results will be reported at a later date . . . I might possibly get around to this sometime.

The most reliable values are those of Jones . . . He was a student of mine.

Discussion

It is suggested that . . . It is believed that . . . It may be that . . . I think.

It is generally believed that . . . A couple of other guys think so too.

It might be argued that . . . I have such a good answer to this objection that I shall now raise it.

It is clear that much additional work will be required before a complete understanding . . . I don't understand it.

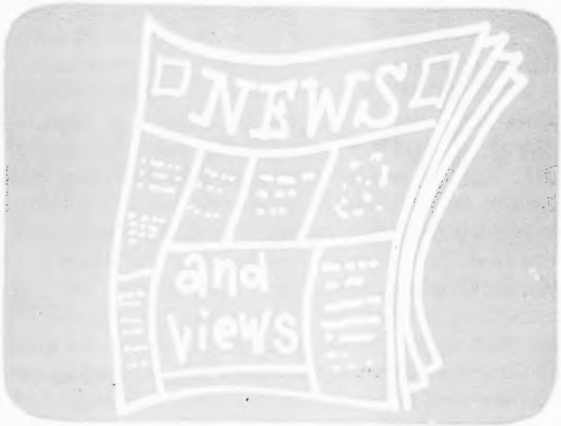
Unfortunately, a quantitative theory to account for these effects has not been formulated . . . Neither does anybody else.

Correct within an order of magnitude . . . wrong

It is to be hoped that this work will stimulate further work in the field . . . This paper isn't very good, but neither are any of the others in this miserable subject.

Acknowledgements

Thanks are due to Joe Glotz for assistance with the experiments and to John Doe for the valuable discussions . . . Glotz did the work and Doe explained what it meant.



MEMO TO STWE MEMBERS

Many of you make presentations of papers at various chapter meetings and conventions throughout the country. The audience for these presentations is rather limited. Therefore I propose to print abstracts of these presentations in this column for the benefit of all our membership. This calls for a little cooperation on the part of the individuals who make presentations. You'll have to take a few minutes out of your busy schedule to address an envelope to me in care of the editorial office of the *Review*—Building 3-244, General Electric Co., Electronics Park, Syracuse, New York—and enclose a copy of the talk with a notation of where and when it was presented. Don't forget to include your name and title, as well as the company or organization with which you are affiliated. A special thank you in advance to all those who will make this endeavor possible.

ABSTRACTING AND INDEXING GROUP FORMED

Thousands of scientific publications are being published every month both here in the United States and abroad. With all this information available the scientists in the United States are complaining about communication difficulties. In answer to this complaint the April issue of *Scientific American* carried the notice of the formation of a new organization in the growing field of technical writing and editing. Fourteen groups engaged in digesting the world literature have formed the National Federation of Science Abstracting and Indexing Services.

Another item in that same issue told of a conference's decision, at Western Reserve University to ask the National Academy of Sciences to make a "crash study" of the possibility of creating a national center for coordinating scientific and technical information.

THETA SIGMA PHI

Through our correspondence with Mrs. Dibelka, in regards to her article in this issue, we learned of Theta Sigma Phi, a fraternity for women in journalism. This organization was founded in 1909 at the University of Washington, Seattle. It maintains student chapters at 58 of the leading schools of journalism, and 40 alumnae groups in leading cities of the United States and in Honolulu.

Theta Sigma Phi's Committee on Education and Professional Development is currently collecting and disseminating information concerning career opportunities in the field of technical and scientific writing. Mrs. Dibelka is chairman of the committee.

COMMITTEE FOR STANDARDIZATION IN THE FIELD OF LIBRARY WORK AND DOCUMENTATION

The American Standards Association has many committees in various fields. One committee, which should be of interest to some of our membership, is for the Standardization in the field of Library Work and Documentation. This committee is responsible for developing and coordinating standards for concepts, methods, and equipment used in library work, and in the preparation and utilization of documents. Its goal is to bring about nationwide agreement on these standards among all groups concerned, and to present the United States viewpoint in the work of the International Organization for standardization on these same subjects.

This committee has a number of active sub-committees, including: Abbreviation for Periodicals, Bibliographical References, Indexing, Proof Correction Signs, Reference Data for Periodicals, Statistics for Libraries, and Transliteration.

by Richard A. Hanousek

IRE BANS TECHNICAL PUBLISHERS FROM 1959 SHOW

A May issue of *Electronic News* carried the announcement that the exhibitors committee of the 1959 Institute of Radio Engineers Show has banned technical publishers from exhibiting. Space shortage at the New York Coliseum was cited as the reason. Since many of the people our membership serve write for these publishers, wouldn't it be advantageous for these publishers to exhibit at our convention in November? We are sure that it would profit both our membership and themselves equally well. By getting to know these publishers and their requirements we can insure that they get the material they want and in the condition that is readily acceptable.

CHILTON INITIATES "COMMUNICATIONS SERIES" BOOKS

From Jerome Prevette, Marketing Manager of the Chilton Company's Book Division, we received word of his company's plans to publish textbooks and books of interest to the practitioners in all phases of the communications arts. The first book in what has been entitled Chilton's Communications Series will be Thomas Elliott Berry's "Journalism Today".

Mr. Prevette has asked me to ". . . pass the word along to your members that Chilton editors are anxious to see what they are writing, or to hear their writing plans . . ." Chilton has produced an author's guide, in booklet form, which is very interesting and informative. We are sure that they will be glad to send you a copy of this booklet if you write and ask. The addess is: Chilton Company—Book Division; 56th and Chestnut Streets; Philadelphia 39, Pennsylvania.

The Chilton Company has the resources and the talent to do editorial and promotional justice to manuscripts it accepts and publishes. So write Chilton if you have plans afoot for a book. It need not be in the communications arts field for Chilton publishes books in a great number of fields.

MAGAZINE ARTICLES ABSTRACTED ELECTRONICALLY

In another section of this column we told of the formation of the National Federation of Science Abstracting and Indexing Services. With the caption on this section it looks as if they may be out of business in the not too distant future. (We sincerely hope not.)

At the national convention of the Institute of Radio Engineers in New York City this past March, the International Business Machine Corporation announced its "Auto-Abstract" system. The system first takes the complete text of an article and transcribes it on to magnetic or punched tape in a code than can be understood by an electronic data processing machine. The machine then analyzes the text word by word to derive statistical information concerning the frequency and distribution of the words in the text.

From this, the machine determines the relative degree of significance of the words and then grades each sentence as to its importance. Sentences scoring highest in significance are automatically extracted from the text and printed out by the machine to form the "Auto-Abstract."

In addition to creating abstracts, the system can be used to condense lengthy reports.

The system also promises to expedite the translation of foreign scientific articles by producing foreign language abstracts of the original paper. A person then only has to translate the abstract rather than the full

(Continued on Page 20)

A PLAN FOR MAXIMUM UTILITY IN GOVERNMENT CONTRACT REPORTS COVERING RESEARCH AND DEVELOPMENT

E. W. Herold

This article discusses the effect on efficiency of various ways of preparing government contract reports, particularly the regular quarterly report intended to cover all the work done in the interval.

Greater results from research and development programs, at no cost, can come from an increase in efficiency of the scientists and engineers working on them. This article discusses effect on this efficiency of various ways of preparing government contract reports, particularly the regular quarterly report intended to cover all the work done in the interval. It is suggested that completeness of detail in such reports is not a sufficient measure of their utility to the government agency concerned, or to other scientists and engineers.

A fundamental premise in reporting on research and development to a government agency is that everything of value should be included. However, our scale of value extends not from zero to the positive but includes negative value as well. Thus, an incorrect or misleading result does not have zero value; it has a *harmful* effect on other workers and actually subtracts from their output. Such misleading results must not be confused with correctly determined negative results, e.g., a result that correctly indicates that a desired effect is not possible under given circumstances. These correct but negative results have *positive* values, since they have a beneficial effect on other workers.

In a research report, it is extremely important to maximize the utility to others by observing the following rules:

a. Eliminate negative values altogether
b. Devote very little space and avoid detail in presenting results with a value that hovers around zero on the scale
c. Describe in detail, and with full emphasis, a result that has a clearly discernible positive value
d. When there are many results, proportion the detail and the emphasis to the value, so that the most valuable result is described in the most comprehensive terms

When a paper is prepared for publication in one of our better journals, it is reviewed by one or more inde-

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pendent readers who use exactly these criteria. Unfortunately, contract reports are not independently reviewed. We have all see such reports with hundreds of pages of text, curves, photographs, and diagrams, all of which can easily be dismissed as much ado about nothing. Equally unfortunate is the report that describes an obviously valuable result in so little detail that it cannot be repeated elsewhere without duplicating much of the original work. But worst of all is the report with results that cannot be relied upon and are later found to be in error.[1]

The major difficulty in following the above rules lies in the evaluation of research results. When the author of a report does not see the true value of his work, positive or negative, he will certainly be unable to avoid wasting the time of others. There seems to be little that can be done about this expect a careful review by a supervisor or a colleague with better judgment.

However, and this is the main thesis of this article, in most instances the research investigator himself is the most competent judge of value, and he does correctly evaluate; it does not follow that the most useful report is prepared. There are many pressures on a writer of a contract report to deviate from the path of maximum utility. He may have worked for three months and have accumlated only data of extremely doubtful or even negative value. Since others may not share his insight, he is often praised when he submits an excellently written and complete report; yet, if he were asked to submit the same data to a technical journal, he would hesitate immediately to subject it to the scrutiny of critical review. He may have been encouraged to present *all* his work, good and bad, by a policy which assumes that proper evaluation will be done by each competent reader; at best, this is an extremely wasteful process. There may also be temptation to deviate from the best policy when a very important result is achieved. In such an instance, there may be a temporary advantage over hypothetical competitors by withholding key information from the report or by underemphasis of the important result and overemphasis of relatively unimportant data. To repeat, then, though a research investigator correctly evaluates the importance of his work, his evaluation may not always be used to the maximum benefit of others.

The effect of reports that depart widely from the rules leading to maximum utility is to mislead the government agency concerning the progress which is being made and to reduce markedly the efficiency of research and development workers who endeavor to use the contract reports to further their own work. Certain astute scientists are known to ignore the average contract report, preferring to wait for journal publication in which the author has more nearly approached a proper balance between emphasis and value.

In summary, the persons responsible for research directions in governmental organizations, in industry, and in academic institutions should try to instill in the research investigator a clear comprehension of the overall benefit to be obtained by preparation of contract reports so as to be of greater use to others. These benefits are of exactly the same nature as those that come from a universal publication policy in science; each scientific worker is aided far more by the ability to use work *of* others than he loses by preparing his own work for use *by* others. The taxpayer, whose objective is to obtain a maximum return from each dollar spent on government-sponsored science, has an equal interest in improving the utility to society of government contract reports. Ω

[1] J. R. Pierce, in a report on Basic Research in Electronics prepared for the Technical Advisory Panel on Electronics, states ". . . the greatest retarding influence on an art is inadequate or incompetent work. . . . It wastes the time of other competent workers in following it, and it misleads the less competent as to what is desirable or possible."

A STUDY IN COMMUNICATION

William A. Freedman

This experiment bears out the conclusion that as a paper is abstracted, the reading speed decreases. However, the tests scores indicate that an equivalent amount of information is conveyed.

Some authorities tell us that reading time may be saved with abstracted material, but at a sacrifice of comparison and retention. We are also frequently told that the principle of repetition is a positive factor in the learning process.

From a recent study made at Rensselaer Polytechnic Institute, certain conclusions have been reached that tend to disprove these statements.

The experiment in communication was conducted by students in the graduate program in the Technical Writing and Editing Division under Dr. Sterling P. Olmsted.

Experimental Preparation

Three articles of about equal length were chosen: one paper was on guided missiles; another was on aircraft detection systems; and the third was on systems engineering. These three articles were taken from one issue of an aircraft company's publication. We originally judged that they were approximately equal in degree of technical information, and that one would be no more difficult to read and understand than another. Our observations belied this judgment—the article on systems engineering was much too difficult—and we were forced to disregard the results obtained with the testing on this paper.

For our testing purposes, all charts, photographs, and other non-verbal presentation were excluded from the articles. Each piece was then condensed to about one-half its original length by deleting extraneous and repetitious information. But the salient features were retained. The first condensation was further reduced and rephrased to bring the wordage to approximately one-sixth the original length.

Finally a test of 15 questions was devised for each subject, based on the information contained in the final condensation. The questions were a combination of true-false and multiple-choice types; the test to be given after each version of the article was read as a check on how much material was absorbed and retained.

Experimental Procedure

When we administered this experiment to 6 freshman Military Science Department classes of approximately equal size, we took extreme care to make the actual procedure appear routine. The students were cautioned that the grades attained would be used in determining their final course mark. Classroom procedure and seating remained unchanged as well.

In order to measure reading speed, the instructor, Captain Herbert H. Ray, U.S.A., told the students to make a mark on the paper when "time" was called at the end of three minutes. Then they were instructed to finish reading the paper, turn it face down when finished, and hold up one hand.

When the papers had been read completely, Captain Ray collected them and distributed the tests. No time limit was imposed on the taking of the test, but generally all tests were turned in within 10 minutes.

We decided that paper-A would be given to all groups in its original (long) form only, the results obtained from the use of this article to serve as a basis for comparison. The other papers were given in the following sequence:

	Guided Missiles 1st test	Aircraft Detection Systems 2nd test	Systems Engineering 3rd test
Class I	A	B	C
Class II	A	B-1	C
Class III	A	B-2	C-1
Class IV	A	B	C-2
Class V	A	B-1	C-1
Class VI	A	B-2	C-2

A, B, C—The original article or the *long* form.
B-1, C-1—The first condensation or *medium* form.
B-2, C-2—The second condensation or *short* form.

Results

Disregarding the results from paper-C, Table 1 bears out the conclusion that as a paper is abstracted, the

Table 1

TABULATED SCORES

CLASS	GUIDED MISSILES PAPER-A LONG ONLY		AIRCRAFT DETECTION SYSTEMS PAPER-B LONG		MEDIUM		SHORT		SYSTEMS ENGINEERING PAPER-C LONG		MEDIUM		SHORT	
	R	S	R	S	R	S	R	S	R	S	R	S	R	S
I	205	11.9	226	11.5					177	10.7				
II	225	12.1			188	11.5			159	10.2				
III	192	11.5					156	11.6			151	9.5		
IV	218	11.9	194	11.1									143	10.8
V	234	10.7			197	10.7					176	9.6		
VI	211	11.9					148	10.6					167	9.1

R—Average reading rate in words per minute
S—Average test scores, number of questions answered correctly out of 15 maximum

reading speed decreases. The test scores in the same table indicate than an equivalent amount of information is conveyed.

Since paper-B (long form) was 3,104 words in length, and the average reading time of both classes reading this was 210 words per minute, the entire paper could have been read in an average time of 14.8 minutes. Paper B-1 (medium form), 1,720 words long, could have been read in 8.9 minutes at the average reading rate of 192.5 words per minute. The short form, B-2, was 572 words in length, and could have been read in 3.5 minutes at the average speed of 152 words per minute. Since the test results were practically equal, B—11.3, B-1 and B-2 each 11.1 out of a maximum of 15, we concluded that a paper can advantageously be abstracted in order to conserve total time in reading, yet with the assurance that an equivalent amount of information will be retained.

Several interesting results were noted with respect to the students being tested. An examination of the individual test scores in relation to reading speeds on the long form showed that, on the average, students with faster reading rates had slightly better than average scores. This line of central tendency decreased in slope as the papers were condensed indicating that the faster readers were not scoring higher than the average, and even tended to be less than average on the shortest form. We concluded that the reader must understand, by warning if necessary, that he is reading a very condensed version and must slow down his normal reading rate to match the density of the information.

By our system of examination and scoring, we were able to recheck on our own ability at abstracting material and devising tests. In one instance, upon checking the test papers, we found that question 4 on the test of paper-B-1 (medium form) was answered incorrectly by a far greater number of students than those taking papers-B (long form) and B-2 (short form). Therefore, paper-B-1 needed rewriting. Some information had been omitted or some misleading information had been inserted.

Side Results

The first test, paper-A, was accepted by the students as routine. The second test was accepted by the students tested with paper-B (long form), also with no reaction. But papers-B-1 (medium form) and B-2 (short form) evoked a mild resentment, significantly a reaction against the condensed forms. And the scores show that even though there was a resentment to the condensed versions, the students taking the condensed forms scored as well as those taking the long form (see table 1).

A more violent reaction occurred with the introduction of paper-C in all three forms. We drew three conclusions from this: (1) paper-C was too difficult a paper in contrast to the other two papers; (2) paper-C was completely out of line with what they had been studying; and (3) three papers and tests in succession were too many for the students.

Present Status

We have just finished retesting the students. We gave them the test again without opportunity to reread the article to find out how much information was retained after two months. The results were:

	Long Form	Medium Form	Short Form
Paper-B	8.5	8.7	8.9

A question arose after this whether these scores indicated some retention from the original article, or whether any student could score as well from innate knowledge. We gave the test to a freshman English class—the students were given no prior information whatever—and the average score was 6.2 We were able to conclude that there was some retention in the retest, and, with practically equal scores (the differences were too slight to be considered significant), our conclusions of equal retention, regardless of degree of abstraction, was upheld.

RESEARCH WRITER

WANTED

Will assist engineers and physicists in reporting and interpreting research and development results in electronics, atmospheric physics, radar systems, instrumentation, and related fields. The position carries the same salary and professional status accorded to other staff members. In addition to literary efforts, incumbent will be expected to perform research within his field.

This vacancy has been created by the desire of our Research Writer to devote full time to his research activities. All replies will be answered promptly and treated confidentially. Please address J. N. Ruch.

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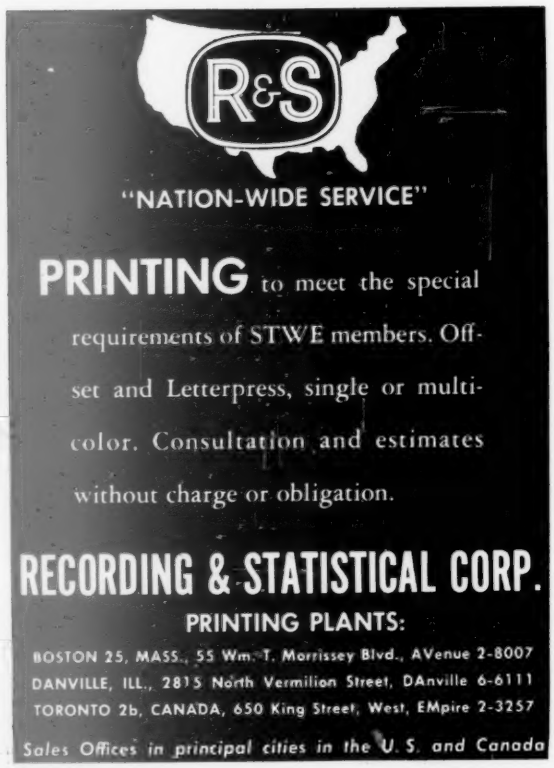
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Future Possibilities

If one examines the experiment from all angles, many possible variations in experimentation come to mind. We can use the medium and short forms of paper-A and use paper-B as the control. This will serve as a cross-check.

A new and better paper should be substituted for paper-C. For that matter, entirely new papers could be used for all three. Many variations in writing, rewriting, and abstracting could be tried. Experimentation could be made by adding non-verbal presentation. Tests might be conducted with equal length and density papers, but have one paper with significant words and phrases underlined. These and many other variations may some day be tested.

The results that we have come up with are not world-shaking, but they are worth studying. Many of our surmises were completely wrong. This is a positive step. Technical writing is a new profession, and being new, it must be dynamic. Graduate students who follow us may continue with our experiment, and each new discovery could help the writer do a better job. Ω

NEWS & VIEWS

(Continued from Page 15)

paper to find out what is in it, and the translations of full articles can be limited just to those that are found to be especially important.

REPORT ON "COMMUNICATIONS IN INDUSTRY" SEMINAR

On January 31 and February 1 of this year, the Southeastern Michigan Chapter of STWE conducted a seminar entitled "Communications in Industry." We recently received a copy of the report on that seminar.

This report described the organization of the seminar, the program, publicity, arrangements, attendance, financial data, the follow-up procedures, and conclusions. The Chapter points out that this report ". . . has been prepared for use by those chapters of the Society of Technical Writers and Editors which wish to plan and conduct seminars, workshops, conferences or similar activities to promote the profession of technical writing. Intended as neither a guide nor a model for such undertakings, the report is offered in the belief that each new endeavor can improve upon the previous performances if they are adequately evaluated."

The Chapter would appreciate receiving comments regarding either the seminar or the report. Information about the seminar can be obtained from W. P. Mimnaugh, Chapter President, or R. L. Fedor, Education and Seminar Committee Chairman. The address is:

The Society of Technical Writers and Editors
Southeastern Michigan Chapter
P.O. Box 83, North End Station
Detroit 2, Michigan

WHAT HAPPENS IN BOOK PUBLISHING. Chandler B. Grannis, ed. 414 pages. New York: Columbia University Press (1957). $5.50.

Twenty-one leaders in various branches of the book industry have contributed to this interesting volume. It's hard to put it down once you've begun reading in it. This is not only the most up-to-date survey of the book industry, but one of the best that has yet been published.

All the steps in producing and selling a finished book —from idea to consumer—are covered here, each by a specialist. Ten pages at the end of the book present many interesting statistics on the book business.

Individual chapters are devoted to such subjects as securing the manuscript, copy editing, production and manufacturing, book design, sales, advertising, publicity, promotion.

Special treatment is given the complex subjects of subsidiary rights and permissions, business management and accounting, legal aspects, and foreign distribution.

The final part of the book treats individually specialized areas of book publishing, each handled by an expert. For instance, technical, scientific, and medical publishing is contributed by Curtis G. Benjamin, President of McGraw-Hill Book Co., textbooks by Mauck Brammer, managing editor of the American Book Co., and children's books by Eunice Blake, children's book editor for J. B. Lippincott Co.

Earlier in the book, advertising is given excellent coverage by Franklin Spier, for many years President and Treasurer of Franklin Spier, Inc., a well known advertising agency specializing in the book field, and production and manufacturing are handled by Frank B. Myrick, editor of book production.

References for futher reading are given at the end of each chapter.

To the worker in a library, in publishing, writing, or editing, in the graphic arts, in the book trade; indeed, to anyone who has a love of books, this volume is recommended reading. It is at once enjoyable and informative.

R. M. Stern

MANUFACTURING METHODS AND PROCESSES. Arthur C. Ansley, 553 pages, Phila.: Chilton Co. (1957). $7.50.

Mr. Ansley and Chilton have done more than write and publish a book. They have performed a public service. This book gives an overall view of the entire spectrum of manufacturing techniques, and as such it is a valuable source book and reference for many topics including sintering, electroforming, ultrasonics, electrical discharge machining, plastics fabrication, bonding, ceramics, and printed circuits as well as the more commonly-known methods.

It does not explain the individual processes in detail for this is not the purpose of the book. But it does serve as a reference as well as an introduction to the entire field of modern processing. The book provides sufficient specific references to the sources for further detailed data in any individual field.

Many technical writers in their writing or editing come across a manufacturing process which they would like to know more about. And this book provides a ready reference to learn more about the newer techniques.

Physically the book is also interesting. More than 780 illustrations show the type of part made and the manufacturing processes used. All illustrations are in groups at the end of each chapter. Since there are so many excellent illustrations this appears to be a satisfactory method of presentation.

Mr. Ansley has drawn on his 30 years of industrial experience to provide a useful and readable book. The author now heads his own company at New Hope, Pa. This book reflects Mr. Ansley's long experience in and knowledge of the modern manufacturing processes.

A. H. Lytel

SUBJECT GUIDE TO BOOKS IN PRINT 1957. Herbert B. Anstaett & Sarah L. Prakken, Editors, New York: R. R. Bowker Co. First Edition. $12.50.

This guide should prove a timesaver to writers and editors searching for books on any conceivable subject. The guide lists 113,000 books, in print and currently

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Assignments are in a number of Air Force projects now under way at IBM, including: engineering and production of radar-navigation equipment for B-52 aircraft; development of a digital navigational computer; and special research studies on future Air Force programs of an advanced nature.

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available in this country, covering 22,000 subjects ranging from the abacus (a digital computer occasionally used by Chinese laundrymen) to Zwinglianism (a medieval sect).

Just to indicate the vast scope of this work—under the subject of Space Flight are listed 17 books, together with a cross reference to Interplanetary Voyages which in turn lists, coincidentally, 17 other books and two cross references.

Three years in preparation, this guide is, in effect, a summary of the card catalog of a great library.

The guide lists books by author, title, current price, and publisher. It does not list poetry, drama, government publications, books priced less than 25 cents, and fiction except that based on extensive research. A directory of publishers and addresses is included.

H. K. Mintz

TECHNIQUES OF MAGNETIC RECORDING, **Joel Tall. New York: MacMillan Co. (1958).**

This book gives an excellent descriptive coverage of the field of magnetic recording. It should appeal primarily to users of magnetic recorders with a limited knowledge of physical science.

Approximately the first quarter of the book is devoted to a historical account of the development of magnetic recording, a discussion of the different methods of recording now used, and details of manufacturing the equipment. The remainder of the book concerns itself primarily with applications of magnetic recording. Much general information is given plus specific details and techniques for particular applications. A listing of the topics included in the chapter titles indicates the scope of the material covered. Some of these are: development of magnetic recording, simplified theory, recording media and their manufacture, drive mechanisms, erasing, fundamentals of magnetic sound recording, recording sound in nature, maintenance, spurious printing, editing, re-recording and copying techniques; also applications to radio broadcasting, motion pictures and television, information recording, medicine, education, home uses and telephone recording, public entertainment, advertising and warning methods, and legal uses and their limitations.

The author's experience and personal knowledge is evident in the discussion of precautions and recommendations in the use of the equipment. This should be welcomed information for users who lack technical information. To the technical worker involved in one aspect of magnetic recording, this book offers an opportunity to obtain the "big picture". However, at times he may be disappointed because of lack of technical detail. For instance, in the first chapter a translation of original notes discussing the discovery of the

effects of a.c.—bias is included but the accompanying drawings are omitted. Including the figures would have made this passage more meaningful.

In summary, it should be stated that this text presents a well-written compilation of a wealth of useful detailed information in the techniques of magnetic recording and is a welcomed addition to the literature.

B. Silverman

COLD INJURY: Trans. of the 4th Conf. M. Irene Ferrer, ed. 371 pages. (1956). $5.95.

GESTATION: Trans. of the 3rd Conf. Claude A. Villee, ed. 253 pages. (1957). $4.75.

NEUROPHARMACOLOGY: Trans. of the 3rd Conf. Harold A. Abramson, M.D., ed. 381 pages. (1957). $4.50.

PHYSIOLOGY OF PREMATURITY: Trans. of the 1st Conf. Johnathan T. Lanman, ed. 151 pages. (1957). $3.25. New York: The Josiah Macy, Jr. Foundation.

The Josiah Macy, Jr. Foundation publishes multi-professional discussions of current research in medicine under the title of "Transactions" in 20 different areas of medicine. The four titles above are among them.

The conferences from which these transactions derive are sponsored by the Foundation in an attempt to stimulate research and to promote effective communication across the departmental walls which tend to isolate the professions and specialties from one another.

In publishing the transactions, every effort is made to preserve the informal nature of the meetings so that the reader may participate vicariously in the give and take of the lively discussions. The books contain illustrations, figures, charts, indices and accurate bibliographies contributed by the various professions represented.

All of the transactions above cover conferences held in late 1955 and in 1956. R. M. Stern

QUALITY CONTROL AND STATISTICAL METHODS.

Second edition. Edward M. Schrock. 264 pages. New York: Reinhold Publishing Corp. (1957). $6.75.

Since the first edition of this book was published in 950, there has been a tremendous increase in the use of formal quality control programs and in the development of modern quality control techniques. During this period, it has become increasingly evident that, while statistical and other special techniques are vital to the success of a quality control program, they will not in themselves ensure its success. The prime prerequisites in this as in other programs are sound organization and efficient administration.

Recognizing the importance of these factors, the author has included chapters on the development of modern quality control, and organizing for quality control.

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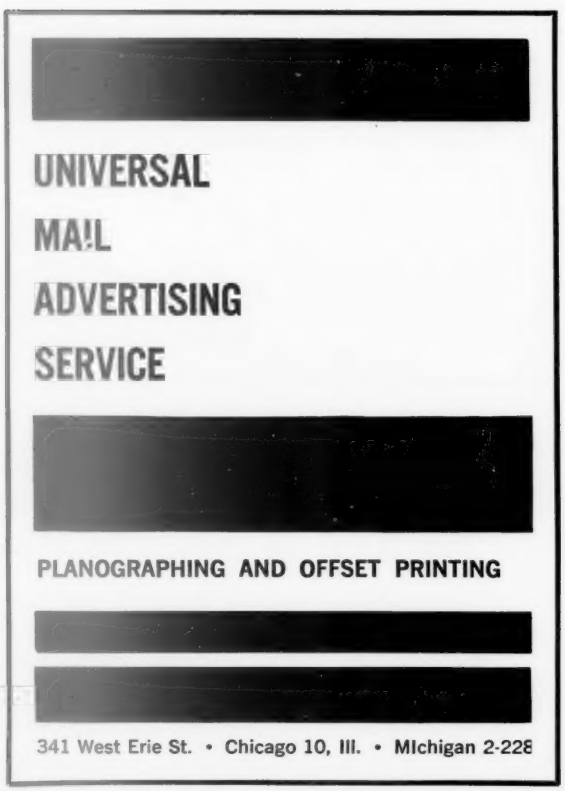
To increase the value of the book as a teaching text, problems have been added at the end of many of its 24 chapters. For those primarily interested in statistical techniques, new material on rapid approximate tests of significance, and analysis of variance is included. Many case histories are given.

Among the subjects covered are: means of presenting information; applications of various types of control charts; the nature of acceptance sampling; modification of control limits; and probability distribution and the significance of differences. **R. M. Stern**

ALTERNATING CURRENT BRIDGE METHODS. **Fifth edition, revised. B. Hague. 650 pages. New York: Pitman Publishing Corp. (1957). $12.50.**

Dealt with is the subject of alternating current bridge measurements of inductance, capacitance, and impedance at power and audio frequencies. Intended primarily as a handbook, the fundamental theory of alternating current bridge networks and their applications is thoroughly treated. This coverage normally falls outside the scope of books on the subject of a-c theory. Several new bridge networks have been added, and additional applications given for some of the older circuits.

R. M. Stern



POLYETHYLENE. **Theodore O. J. Kresser. 217 pages. New York: Reinhold Publishing Corp. (1957). $4.95.**

This is the first of the new Reinhold Plastics Application Series. At least 12 other titles are in preparation under the over-all editorship of Herbert R. Simonds.

No attempt is made here at producing a detailed technical treatise. Rather the emphasis is on applications. A history of polyethylene is given, followed by a discussion of the basic properties as well as its chemistry. The remainder of the book is devoted to thorough treatment of the manufacture and processing of polyethylene, and its applications in various forms such as extrusions, bottles, moldings, vacuum formings, and other methods of fabrication. The final chapter discusses the future prospects for this versatile plastic material.

R. M. Stern

ENGINEERING METALLURGY. **The Committee on Metallurgy. 516 pages. New York: Pitman Publishing Corp. (1957). $7.50.**

The Committee on Metallurgy is a collaborative writing group comprised of 39 professors of metallurgy from colleges and universities all over the country.

The purpose of the book is to present a concise, understandable discussion of the principles of ferrous and nonferrous metallurgy for all engineers, student and practicing. The emphasis is on principles rather than on handbook-type information, although much data is given to back up the theoretical discussions.

The 23 chapters split into several major groups: general principles of metallurgy as related to engineering; nonferrous metals and alloys; iron and steel; machinability, corrosion, heat treatment, and the effects of temperature. **R. M. Stern**

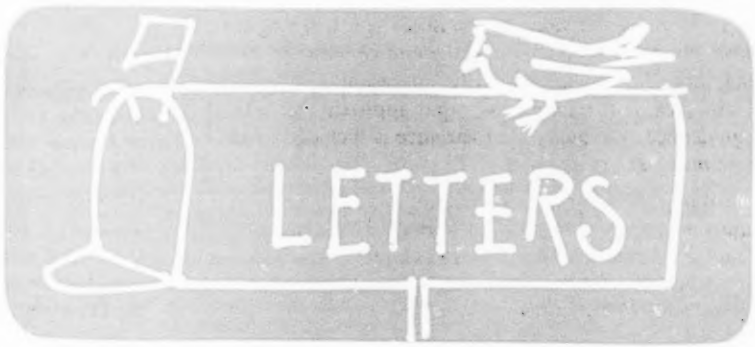
HOW TO USE A TAPE RECORDER. **Dick Hodgson and H. Jay Bullen. 216 pages. New York: Hastings House (1957). $4.95.**

The authors, former broadcasters and now advertising men, have written ". . . strictly for the recorder owner, or user, who doesn't know a cathode follower from a phono jack (and cares less)."

Layman's language is used to describe the workings of a tape recorder and its accessories, but the emphasis is on showing how to get maximum use from this versatile communications tool.

Hundreds of uses of tape recorders are suggested and described, from cutting inventory costs to point-of-purchase displays, from party games and hobbies to child training and smoother home operation.

For those who are considering the purchase of a recorder, good explanations are given of what to look for in selecting a machine, and simple charts show graphically the various aspects of the "ideal" recorder. The care and feeding of a recorder are covered, together with a glossary of tape-recorder "jargon". **R. M. Stern**



May 8, 1959

Dear Allan:

I have just finished reading Ethaline Cortelyou's article, "Some Qualifications of a Technical Editor" that appeared in the current issue of the STWE Review. I can't recall when I was so let down with a piece of writing.

My real disappointment is attributable to the fact that the article does not deliver a single paragraph on the promise of the title: some qualifications of a technical editor.

This failure to deliver in the body of the article the promise of the title disturbs me very much. It is a rather common failing among technical writers and editors; a failing that is obvious to their superiors, but apparently not recognizable by them. Until they recognize this deficiency in their writing, how can they expect to enjoy a professional status?

I bring this unpleasant message to a close with a plea that we exercise greater vigilance and concen in our review and acceptance of manuscripts: which fortunately was done in the case of the other essays that appear in the current issue of the Review.

Kindest regards.

Very truly yours,
H. C. McDaniel, Director
Technical Information
Westinghouse Electric Corp.
Pittsburgh 30, Pa.

8 May, 1958

Dear Allan:

I want to say, a little more fully than I could by telegram, how much I, personally, appreciate the high calibre established with the present issue of the Review. Your "Editorial" strikes the proper note and the entire contents continues the note at the same pitch.

I am particularly interested in seeing, in print, Ethaline Cortelyou's views about qualifications for a technical editor and have been interested to examine the curricula that she cites. I also like the approach taken by C. A. Church to communication problems. Your various features, particularly that by Dick Hanousek, are all useful. I can see that you will be hard put to it to maintain the high standards you have set by this issue but I think you and your staff are just the people who will do it. Will you please convey to your staff, including Tom Grogan who backs you up so effectively, the sincere thanks of the Board and the membership of STWE.

Even though I am well aware of your feelings of modesty, may I suggest that this letter should be published in the next issue of the Review in, "Letters to the Editor".

Very cordially yours,
I. H. Jenks,
Aluminium Laboratories, Ltd.
Kingston, Ontario
Canada

31st March 1958

Dear Mr. Lytel,

Thank you very much indeed for forwarding to us 'TWE Journal', Summer 1957, particularly as this is in short supply. This will prove very useful in our library.

Yours faithfully,
B. Warburton, (Miss)
Librarian
The United Steel Companies Ltd.
Swinden Laboratories
Moorgate, Rotherham

March 17, 1958

Dear Mr. Lytel:

I read with special interest "A Timetable For Report Writing" by Warren B. Bezanson in the STWE Review for January—not only because of the idea that the writer mainly intended to express, but also because of the clearness with which the article pointed up a fact about report writing that usually passes without comment.

I refer to the fact that the order in which parts of a report are arranged differs sharply from the order in which a writer brings them into existence.

This difference makes life more difficult for a person who teaches report writing in university, and who must be trying, at the same time, to acquaint his students with the nature of the finished product and with the process by which that product is produced. Though I have been teaching report writing for many years, I believe I can do better in making my students grasp this idea as a result of Mr. Benzanson's contribution.

Assisted by such practical articles as the one mentioned and many others in your publication, those of us who work with the technical writers of tomorrow can turn out a better product for industry.

Sincerely yours,
Theodore A. Sherman
Professor of English
University of Idaho
Moscow, Idaho

March 26, 1958

Dear Mr. Lytel:

In looking over our file of the various TWE publications, we find that we *have* the following titles and issues.

1. TWE BULLETIN, no. 5, 1955
2. TWE JOURNAL spring, fall, 1956
3. TWE NEWSLETTER v. 2 nos. 1-4, 1956; 3 nos. 1-2, 4, 1957
4. TECHNICAL WRITERS, Oct. 1957
5. STWE REVIEW v. 5 no. 1, 1958

Note! we do not have any issues of the TECHNICAL WRITING REVIEW.

We would like to know, first of all, what constitutes a complete file of each of the above titles (including the TECHNICAL WRITING REVIEW), secondly where we might be able to purchase these items, if they are available and thirdly how many, if any, of the titles listed have been discontinued.

We wish to thank you in advance for any assistance you may be able to give.

Yours truly,
Thomas P. Rosolio
Periodicals Assistant
Medical Library
Columbia University
New York, New York

This is a tough one. Can any of the membership give us the complete story on TWE and STW publications?—Ed.

March 13, 1958

Dear Mr. Lytel:

I am writing the ENGINEERING SECRETARY'S HANDBOOK and respectfully request permission use a synopsis of the introduction and the remaining text of the article "Note on Preparation of Manuscripts Relating to Technical Subjects," by Tracy W. Simpson, which appeared in the January 1958 issue of "STWE Review." I plan to use the article in my chapter on "Punctuation and Grammar." . . .

I am a member of the Fort Wayne Chapter of STWE and employed at The Magnavox Company as a Junior Technical Writer.

Thank you very much for your consideration.

Yours very truly,

(Mrs.) Eleanor Laird
Fort Wayne, Indiana

May 2, 1958

Dear Mr. Hanousek:

Many thanks for the April issue of your STWE REVIEW. I am delighted to learn that the paper presented by Dr. R. McDowell at our Eighth National Conference on Standards received such significant editorial attention. The format, layout and typographic treatment of your publication is exceptionally well done.

The ASA has enjoyed a close-working relationship with technical writers and has been proud to list the Technical Publishing Society as an Associate Member until February of this year. The publication of Dr. McDowell's article in the STWE REVIEW is, of course, an indication of the stake which your group has in standardization. The Graphic Standards Board of the ASA also reflects the extent to which you and your colleagues view standards as a solution to certain recurring problems.

The American Standards Association would be delighted to have in its membership an organization such as the Society of Technical Writers and Editors. Looking at your list of officers, I note you are a national group and even have a flavor of the international since your President represents Canadian professional interests.

If you think your readers or your STWE officers would like to have additional information on the ASA, please let me know. Perhaps an article on the national standards program in the field of graphic standards would be of interest to some of your readers.

Sincerely yours,

G. F. Hussey, Jr.
Vice Admiral, USN(Ret)
Managing Director
American Standards Association
New York, New York

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AN EDITORIAL POLICY

(Continued from Page 4)

quarterly. Each issue is planned to include several topics for a balanced presentation. The six issues planned for next year will give us more space.

The editorial staff has received many fine suggestions for improving the *Review*. Recently we discussed the convention with some of our Washington members. Irv Jenks has given us some valuable comments which he received during his latest visit to several chapters. We hope to incorporate new ideas for format and content in succeeding issues such as the continuing series on education.

We are also trying to assist and encourage technical writers to write and publish in the *Review* and in other magazines.

If technical writers are to contribute to their own profession they should start writing for magazines. All of us write or edit or publish as a vocation. But it seems that not enough of us write articles for magazines. And we should.

First; writing articles is, in itself, an education. The typical technical writer has a captive audience. If you write a report or an instruction book it will be read. It will be read because some people in your organization have to read it. But pick up a magazine, any magazine. and there is no compulsion to read a particular article. Each separate article competes for your attention. So the first value in writing for magazines is the factor of the non-captive audience.

Your article has to fit. It must fit the subject, the magazine, and the needs of the audience. You will find that each magazine is different. Look at a magazine in your field. Read six or seven copies and then write your article to fit. Then, pick another magazine and write to meet its demands of style and length.

You will learn more about writing.

When you receive your first rejection you will be shocked; most of us who try writing are. You discover that each editor has his own ideas. If you work as an editor try writing and see what it feels like from the other side.

Where are the magazines in your field? Look around, there are hundreds of business magazines (technical and trade publications) covering almost every possible field; look in your library. Many magazines pay for articles, however, writing for magazines is no short cut to wealth.

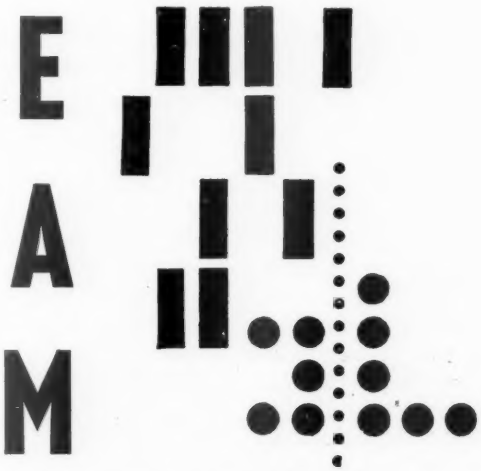
H. C. McDaniel, Manager of Technical Information, Westinghouse Electric Corporation at Pittsburgh, is on our editorial board. Mr. McDaniel spoke on *Writing For Technical Magazines* at a Conference on Scientific and Technical Writing at the University of Pennsylvania in Philadelphia on August 21, 1956.

His excellent presentation has been published in *The Oil and Gas Journal* (November 12, 1956), *Industrial Marketing* (Decemeber 1956), and *Chemical Engineering* (April 1957). His article about articles will be a value to all writers as a starting point.

At the Washington convention there will be a special workshop session on Writing For Technical Magazines. We expect to receive further helpful criticism and suggestions at this meeting.

The *Review* is open for articles and letters. We can't promise to agree. But we promise to listen.

ALLAN H. LYTEL
Editor



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HARRY F. ARADER (Liberal Arts Education for the Technical Writer) is Project Director of the Development Program of the University of Pennsylvania. Dr. Arader is also a member of STWE.

SUSAN SHAFFER DIBELKA (Training the Technical Writer) is a free lance writer living in Whittier, California, and serves as staff writer for The Institute for Research, Chicago, publishers of vocational guidance materials. Mrs. Dibelka prepared the article in response to our request after we had read her series of articles on the same subject in *The Matrix,* the organ of Theta Sigma Phi. She is a member of STWE, the Technical Publishing Society, the National Federation of Press Women, and the Writer's Club of Whittier—as well as Theta Sigma Phi.

WILLIAM A. FREEDMAN (A Study in Communication) is a graduate student in Technical Writing at Rensselaer Polytechnic Institute, and a resident of Albany, New York. His article is the report on an experiment that was conducted as part of his graduate work.

C. D. GRAHAM, JR. (A Glossary for Research Reports) is employed in the Alloy Studies Research section of the General Electric Company's Research Laboratory, Schenectady, New York. This article first appeared in the May 1957 issue of *Metal Progress.*

PAUL R. HEINMILLER (Remove the Doubt) is our guest editor for this issue. He has been Editor of the *General Electric Review* since December 1956. Previous to that date he served as its Managing Editor, and held positions in the General Electric News Bureau, Schenectady, that Company's Advertising and Sales Promotion Department, and as an instruction manual writer in Lynn, Mass. Mr. Heinmiller is member of STWE, the American Society of Mechanical Engineers, the National Association of Science Writers, and the American Association for the Advancement of Science.

EDWARD W. HEROLD (A Plea for Maximum Utility in Government Contract Reports Covering Research and Development) is Director of the Electronic Research Laboratory of the RCA Laboratories, Princeton, N.J. At present he is on leave working on a thermonuclear fusion research project at Princeton University. This paper first appeared in the October 1, 1957 issue of the Advisory Group on Electron Tubes (A.G.E.T.) *News Bulletin.* It was later reprinted in the January 1958 issue of the *Proceedings of the I.R.E.*

STERLING P. OLMSTEAD (The Training of Technical Writers) is Head of the Department of Language and Literature at Rensselaer Polytechnic Institute. Dr. Olmstead is a member of STWE and on the staff of R.P.I.'s Technical Writers Institute.

ERWIN R. STEINBERG (Professional Standards for Technical Writers and Editors) is Head of the Department of General Studies in Margaret Morrison Carnegie College (Carnegie Institute of Technology's woman's college). He is on the Board of Directors of the Pittsburgh Chapter of STWE, and is a member of STWE's national Committee on Education and Professional Development.

BOOK REVIEWERS

ALLAN H. LYTEL is supervisor of the Technical Information Unit in the Electronics Laboratory of the General Electric Company, Syracuse, New York.

HAROLD K. MINTZ is a technical editor in the Raytheon Manufacturing Company's Wayland Laboratory, Wayland, Mass.

BERNARD SILVERMAN is an engineer working on magnetic devices in the Electronics Laboratory of the General Electric Company, Syracuse, New York.

ROGER M. STERN is a technical editor and operator of Publication Engineering Consultants in New York City.

A NOTE TO CONTRIBUTORS

Contributions to this Journal are always welcome; short articles of 500 to 1000 words are most easily fitted into our small magazine.

Send the original on heavy white bond paper, typewritten, double or triple-spaced, plus two carbons. Leave at least a one-inch margin on all sides, number the pages consecutively, and be sure that all illustrations are keyed in with the text.

Articles should not exceed 2,500 words plus three illustrations.

We assume that every article has been approved by your company before it is submitted. The authors' names and affiliations should be on the manuscript. A picture of the author (8 x 10) and a short biographical note are most helpful. This note should include the present title of the author, the full name of his organization and complete information about books, other articles or any other publication credits.

Please address all contributions to the editor; the review committee will read your article and our publication plans will depend on their collective judgment.

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